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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,623	09/27/2004	Lloyd Ballard Mauldin		2622

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CHEMICAL PRODUCTS CORPORATION  
P.O. BOX 2470  
102 OLD MILL ROAD S.E.  
CARTERSVILLE, GA 30120-1692

EXAMINER
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KHAN, AMINA S

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/708,623

Applicant(s)

MAULDIN ET AL.

Examiner

Amina Khan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/9/05, 3/16/04.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6,8-16,18,20-26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidebotham et al. (US 4,003,880).

Sidebotham et al. teach methods of contacting yarns, films, fibers or fabrics comprising polyester (column 2, lines 20-35), nylon and wool (column 4, lines 20-30) with treatment compositions comprising dye-stripping agents, propylene carbonate and 2,6-xyleneol (column 4, lines 1-5). Sidebotham et al. further teach contacting a batch of fabric with fresh or relatively dye-free dye-stripping solvent, using agitation if desired, for a given batch contact time; thereafter removing substantially all of the dye-containing solvent and contacting the fabric with fresh or relatively dye-free dye-stripping solvent, with agitation if desired, for some period of contact time which may differ from the original or subsequent batch contact times; thereafter repeating as many times as desired such dye-stripping solvent addition, in order to obtain the desired degree of dye removal from the fabric (column 5, lines 15-30). Sidebotham et al. further teach undissolved fabric is removed from solution for subsequent use (column 6, lines 45-55).

Sidebotham et al. further teaches Napthalene, which has 0 polyester solubility at 170°C and 55% polyester solubility at 218°C, will only dissolve minor amounts of Nylon 66 (<0.1%) and will not dissolve wool or nylon-6 at up to 218°C (column 4, lines 20-30). Sidebotham et al. further teach the equivalence between naphthalene and propylene carbonate (column 4, lines 1-15). Sidebotham et al. further teaches that the polyester may be poly(ethylene terephthalate) (column 8, lines 55-65).

Sidebotham et al. is silent toward the temperature and weight percentage of propylene carbonate and 2,6 xyleneol application and dye stripping abilities of the

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solvents regarding the nylon or wool. Sidebotham et al. further does not teach all the instantly claimed elements in a single example.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Sidebotham et al. by treating the polyester/nylon/wool fabrics with propylene carbonate at the temperature range taught for naphthalene because Sidebotham et al. teaches the equivalence of naphthalene and propylene carbonate as dye-stripping solvents. Substitution of art recognized equivalents only requires routine skill in the art. One of ordinary skill in the art would further expect that dye removal from the nylon or wool would obviously be provided by the xlenol and propylene carbonate since Sidebotham et al. meets all the claimed method steps of contacting similar fibers with similar compositions at similar treatment temperatures. One of ordinary skill in the art would have been motivated to treat the fabrics with propylene carbonate up to 218°C absent unexpected results.

It would further have been obvious to choose propylene carbonate and 2,6-xlenol as dye-stripping solvents and choose a treatment temperature of above about 215°C from the teachings of Sidebotham et al. because Sidebotham et al. teaches these compounds as effective dye-stripping agents for decolorizing fabrics. Regarding the limitations of treating with at least 200 or 400% of the stripping composition by weight of the fibers, it would have been obvious that this range was met since Sidebotham et al. teaches repeated treatment of the fabrics with the treatment composition and that the fabric may be contacted by a continuous flow of the stripping solvent.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's temperature range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

All disclosures of the prior art, including non-preferred embodiment, must be considered. See *In re Lamberti and Konort*, 192 USPQ 278 (CCPA 1967); *In re Snow* 176 USPQ 328 (CCPA 9173). Nonpreferred embodiments can be indicative of obviousness, see *Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler*, 177 USPQ 399. A reference is not limited to the working examples, see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982).

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4. Claims 7,17,19 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidebotham et al. (US 4,003,880) as applied to the claims above, and further in view of Dias et al. (US 6,540,791).

Sidebotham et al. is relied upon as set forth above.

Sidebotham et al. does not teach dye-stripping compositions comprising surfactants or methyl esters of soybean or vegetable oils.

Dias et al. teach bleaching compositions for non-living fibers of textiles and fabrics such as wool (column 4, lines 5-25) wherein the compositions comprise surfactants (column 9, lines 50-68) and conditioners such as mono, di and tri esters of glycerol such as esters of vegetable oil and soybean oil (column 24, lines 35-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dye-stripping methods taught by Sidebotham et al. by adding to the treatment compositions the surfactants and esters taught by Dias et al. because Dias et al. teaches the efficiency of these additional components in providing efficient bleaching for wool textiles or fiber. It is prima facie obvious to combine the compounds, each taught for the same purpose, to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173 USPQ 801, and *In re Susi*, 169 USPQ 423 when ingredients are well known and combined for their known properties, the combination is obvious absent unexpected results. A person of ordinary skill in the polyamide bleaching art would expect combinations of these materials to behave in the same fashion as the individual materials, absent unexpected results.

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5. Claims 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidebotham et al. (US 4,003,880) as applied to the claims above, and further in view of Yang et al. (US 6,036,726).

Sidebotham et al. is relied upon as set forth above.

Sidebotham et al. does not teach separating polyamide face fibers from carpet backing and cooling the ester composition to precipitate the released colorant and separate the colorant by centrifugation, sedimentation or filtration.

Yang et al. teaches methods of decolorizing polyamide carpets by separating carpet face fibers from carpet backing by shearing, hot-wire cutting or laser cutting before decolorizing (column 6, lines 4-10). Yang et al. further teaches treating carpets comprising polyamides such as nylon 6 or nylon 6,6 (column 5, lines 24-29). Yang et al. further teaches separating colorant after decolorization by cooling the solution and centrifuging or filtering (column 7, lines 55-68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Sidebotham et al. by treating nylons or wools in the form of carpets by first separating the polyamide face fibers from the carpet backing before treatment and separating the colorant after treatment by the methods taught by Yang et al. because Yang et al. teaches the utility of the separation step prior to carpet treatment and the colorant separation after treatment to produce efficiently decolorized polyamides such as nylon 6 or nylon 6,6. One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results.



**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Amina Khan*

Amina Khan  
Patent Examiner  
July 19, 2006

*Lorna M. Douyon*  
LORNA M. DOUYON  
PRIMARY EXAMINER